

Work Order ID 144117

April 04, 2016 1:37:44 PM

3850-591-311

144117

Page 1

Item ID: D350-591-311

Revision ID:

Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016 Start Qty: 10.00

Required Date: 5/2/2016 Req'd Qty: 10.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

N900040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Run Start

NR1

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3272	Rev B

100

100

DC

Doc.Control -USB or Paperwork

Document Control

DOCUMENT CONTROL

0.00

Memo

0.00

Photocopy bluefile and type labels as per PPP D350-591-311 CHG001

10

DAS
28
9-89

MAY 02 2016

MAY 02 2016

110

110

Large Fab

Large Fab

Large Fab

Memo

0.05

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT8719, weld Fwd End Plate as per QSI 004 & Dwg

D3272

A/RAluminum Rod m131562, m133816, m134442

3-Grind End Plate flush

10 8 BE1604-14

B144117 3 X 10 LH3

20.1987645

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : ☐			

Work Order ID 144117

April 04, 2016 1:37:45 PM

144117

Page 2

Item ID: D350-591-311 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible
Start Date: 4/22/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 5/2/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
120						<u>10</u>	<u>APR 14 2016</u>		<u>DAS</u> <u>24</u> <u>9-89</u>
QC	Memo	0.00							
Quality Control									
130	QC5- Inspect part completeness to step on W/O	0.00							
130						<u>10</u>	<u>APR 14 2016</u>		<u>DAS</u> <u>24</u> <u>9-89</u>
QC	Memo	0.00							
Quality Control									
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140							<u>APR 14 2016</u>		
HandFinish	Memo	0.03							
Hand Finishing									

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Work Order ID 144117

April 04, 2016 1:37:45 PM

144117

Page 3

Item ID: D350-591-311 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible
 Start Date: 4/22/2016 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 5/2/2016 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	DAS 18 9-89
150	QC7-Inspect Chemical Conversion Coat	0.00								
150										
QC	Memo	0.00								
Quality Control										
180		0.00								
180										
Large Fab										
Large Fab	Memo	0.05								
Large Fab	1-Assemble Leg Assembly as per Dwg D3272.									
	2-Leave one rivet out until welding is complete.									
	3-Bevel Aft end for welding									
	4-Inspect for foreign object as per QSI 024									
	5-Weld Aft End Plate as per QSI 004 & Dwg D3272									
	A/RAluminum Rod <u>ARKY M131562</u>									
	6-Grind End Plate flush									
	7-Install last rivet as per Dwg.									

10 0 3E16-04-21

10 0 3E16-04-21

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 144117

April 04, 2016 1:37:45 PM

144117

Page 5

Item ID: D350-591-311 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible
 Start Date: 4/22/2016 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 5/2/2016 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <i>M 184371</i>	0.00							
220									
Powdercoat	Memo	0.03							
Powder Coating	START TIME: <i>2:30</i> OVEN TEMPERATURE: <i>320°</i> FINISH TIME: <i>3:00</i>								
230	Wing Walk as per dwg QSI005 4.4 Batch <i>M 1344</i>	0.00							
230									
HandFinish	Memo	0.03							
Hand Finishing									
240	QC3- Inspect Part Finish	0.00							
240									
QC	Memo	0.00							
Quality Control									

10 *16-04-26* *8:30*

x10W d *all 6/6/27*

(10) **DAS**
38
9-89
APR 29 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Work Order ID 144117

April 04, 2016 1:37:45 PM

144117

Page 6

Item ID: D350-591-311 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible
Start Date: 4/22/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 5/2/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Pick Kit	0.00							
250					APR 30 2016	10			DAS 6 9-89
Packaging	Memo	0.00							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
260						10X		DAS 28 9-89	MAY 02 2016
QC	Memo	0.01							
Quality Control									
270		0.00							
270	Packaging					10X		DAS 28 9-89	MAY 02 2016
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD 350-591-311								
	Location : FG084								

Sold

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 144117

April 04, 2016 1:37:45 PM

144117

Page 7

Item ID: D350-591-311 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible
Start Date: 4/22/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 5/2/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC21- Final Inspection - Work Order Release	0.00							
280									
QC	Memo	0.02							
Quality Control									

MAY 02 2016
MLJ 100
Lm 16/05/02

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

April 04, 2016 1:37:53 PM

Page 1

Work Order ID: 144117

144117

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016

Required Date: 5/2/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A04.03.22New issue KJ/RF
IPP Rev:B 07-06-09 Added D3272-1 JLM
IPP C returned to CHG001 for Eurocopter, ref NCR08-082 LL verified by:EC
IPP Rev:D fixe route seq in bom DD 10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3272-1 *D3272-1* Step		Manufactured	No			110	Each	2.0000	1	10			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA003				2					
				140462				2					
D3067-1 *D3067-1* End Plate		Manufactured	No			110	Each	13.0000	1	10			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA003				13					
				141928				13					
D3219-1 *D3219-1* Plate		Manufactured	No			110	Each	50.0000	2	20			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA003				50					
				141416				50					
D3066-1 *D3066-1* Spacer		Manufactured	No			180	Each	3.0000	2	20			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA003				3					
				141931				3					

**

BE16-04-13
B 142680 x10

**

BE16-04-13
B 142780 x10

**

BE16-04-13

**

x20

BE16-04-20
B 142780 x20

Picklist Print

April 04, 2016 1:37:53 PM

Page 2

Work Order ID: 144117

144117

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016

Required Date: 5/2/2016

Start Qty: 10.00

Required Qty: 10.00

MS20600-AD4W4

Purchased No

180 Each

1,642.000 16 160

MS20600-AD4W4

Rivets

[Handwritten signature]

BE16-04-20
M133577 x160

Location

Loc Qty

Loc Code

CCK005

1482

M133990

1482

ST308

160

M132640

160

D3065-041

Manufactured No

180 Each

11.0000 1 10

D3065-041

Step Leg Assembly

BE16-04-20
B144118 x10

Location

Loc Qty

Loc Code

WA002

11

142702

10

143647

1

D3067-1

Manufactured No

180 Each

13.0000 1 10

D3067-1

End Plate

BE16-04-20
B142780 x10

Location

Loc Qty

Loc Code

WA003

13

141928

13

Picklist Print

April 04, 2016 1:37:53 PM

Page 3

Work Order ID: 144117

144117

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016

Required Date: 5/2/2016

Start Qty: 10.00

Required Qty: 10.00

AN3-35A Purchased No 250 Each 253.0000 2 20

AN3-35A

Bolt

**

DAS 6 27
9-89 9-89

DAS
28
9-89

Location	Loc Qty	Loc Code
FG	10	
122800	10	
ST348	243	
m133363	2	
m133992	2	
m134167	50	
m134497	189	

20

DAS 6 27
9-89 9-89

D3235-1 Manufactured No 250 Each 0.0000 2 20

D3235-1

Mounting Lug

**

143809

D3278-041 DAS 28 9-89

Manufactured No 250 Each 19.0000 1 10

D3278-041

Support Assembly

**

142673 x 6

DAS 6 27
9-89 9-89

DAS
28
9-89

Location	Loc Qty	Loc Code
ST522	19	
140959	19	

4 APR 30 2016

Picklist Print

April 04, 2016 1:37:53 PM

Page 4

Work Order ID: 144117

144117

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016

Required Date: 5/2/2016

Start Qty: 10.00

Required Qty: 10.00

NAS1149D0463J

Purchased

No

250

Each

3,271.000

16

160

NAS1149D0463.J

WASHER

134508 X 184

DAS 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

GA	136	
M129390	41	
M132035	95	
ST260a	2000	
M134573	2000	6
ST263	147	
M134039	147	
ST269	988	
M132317	100	
M132677	888	

NAS1149D0563J

Purchased

No

250

Each

1,591.000

4

40

NAS1149D0563.J

Washer

DAS 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

GA	297	
m125807	2	
m133769	295	
ST260a	1000	
m134497	1000	40
ST263	195	
m134257	195	
ST269	99	
m128257	99	

APR 30 2016

April 04, 2016 1:37:53 PM

Shop Packet Print

Page 4

Picklist Print

April 04, 2016 1:37:53 PM

Page 5

Work Order ID: 144117

144117

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016

Required Date: 5/2/2016

Start Qty: 10.00

Required Qty: 10.00

AN5-36A

Purchased

No

250

Each

99.0000

2

20

AN5-36A

Bolt

DAS
6
9-89
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

over004

80

M134502

80

ST299A

1

M131957

1

ST336

18

M130466

15

M134134

1

M134370

2

20

D2618

Manufactured

No

250

Each

85.0000

2

20

D2618

Bushing

DAS
6
9-89
27
9-89

DAS
28
9-89

EXB144670

Location

Loc Qty

Loc Code

ST008A

85

141571

85

D2230-3

Manufactured

No

250

Each

199.0000

4

40

D2230-3

Mounting Lug

DAS
6
9-89
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FG

8

109344

4

89045

4

ST521

191

141406

191

40

APR 30 2016

April 04, 2016 1:37:53 PM

Shop Packet Print

Page 5

Picklist Print

April 04, 2016 1:37:53 PM

Page 6

Work Order ID: 144117

144117

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016

Required Date: 5/2/2016

Start Qty: 10.00

Required Qty: 10.00

D2856-400-720

Manufactured No

250

Each

118.0000

2

20

D2856-400-720

Abrasion Strip 4" X 7.20"

DAS

27

DAS-89

6

9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FG

31

128321

7

134509

4

137049

15

95159

5

ST418

87

141946

87

20

MS21042L3

Purchased

No

250

Each

2,067.000

2

20

MS21042L3

Nut

DAS

6

9-89

DAS

27

9-89

Location

Loc Qty

Loc Code

FP001

100

m133790

100

GA

798

m133790

6

m134360

792

Return2016

1

M132382

1

ST304

1168

m134039

12

m134360

1156

20

DAS
28
9-89

APR 30 2016

Picklist Print

April 04, 2016 1:37:53 PM

Page 7

Work Order ID: 144117

144117

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016

Required Date: 5/2/2016

Start Qty: 10.00

Required Qty: 10.00

AN4-13A

Purchased

No

250

Each

506.0000

8

80

AN4-13A

Bolt

DAS

27

9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FG

20

122808

20

GA

80

m134167

80

O003

300

m134497

300

ST344

106

m134260

106

DAS
6
9-89

80

MS21042L5

Purchased

No

250

Each

468.0000

2

20

MS21042L5

Nut

DAS
6
9-89

DAS

27

9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

140

m127813

140

ST303

328

m134055

78

m134567

250

20

Apr 3 - 2016

Picklist Print

April 04, 2016 1:37:53 PM

Page 8

Work Order ID: 144117

144117

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 4/22/2016

Required Date: 5/2/2016

Start Qty: 10.00

Required Qty: 10.00

MS21042L4

Purchased

No

250

Each

2,561.000

8

80

MS21042L4

Locknut

**

134509

DAS

27

9-89

Location

Loc Qty

Loc Code

FP001

37

m133363

37

GA

381

m133769

381

OVER007

1000

m134606

1000

ST303

1046

m134055

9

m134502

1037

ST305

97

m130922

97

NAS1149D0363J

Purchased

No

250

Each

2,280.000

4

40

NAS1149D0363J

Washer

**

Location

Loc Qty

Loc Code

GA

598

m134055

598

Return2016

2

m132317

2

ST260a

1000

m134606

1000

ST263

680

m134370

680

DAS
28
9-89

DAS
27
9-89
APR 30 2016

40

April 04, 2016 1:37:53 PM

Shop Packet Print

Page 8



DESIGN <i>GP</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED

07.06.04 *[Signature]*

20160401
SA 144117

△
B

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

GENERAL NOTES:

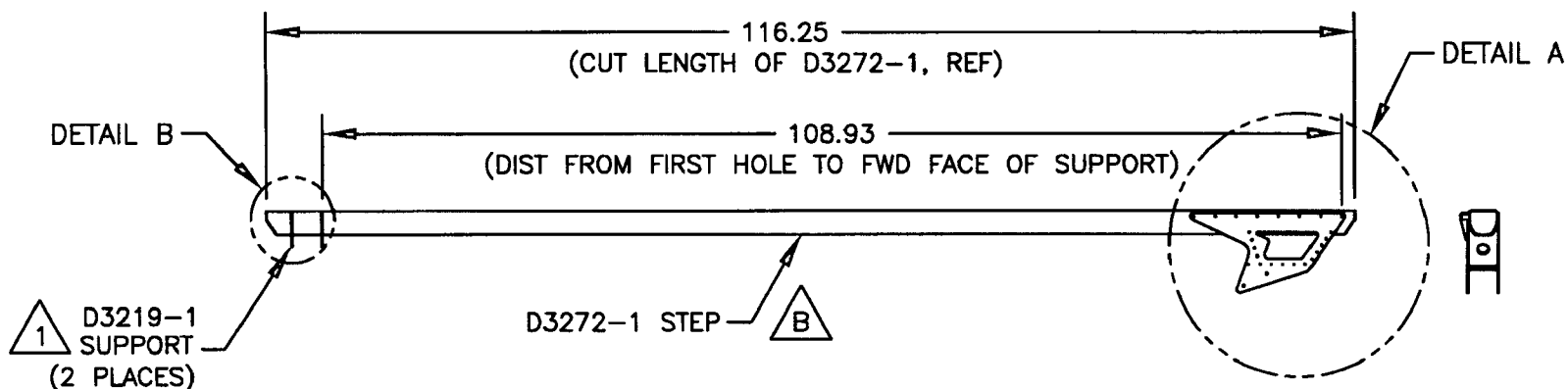
- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

Copyright © 2004 by DART AEROSPACE LTD

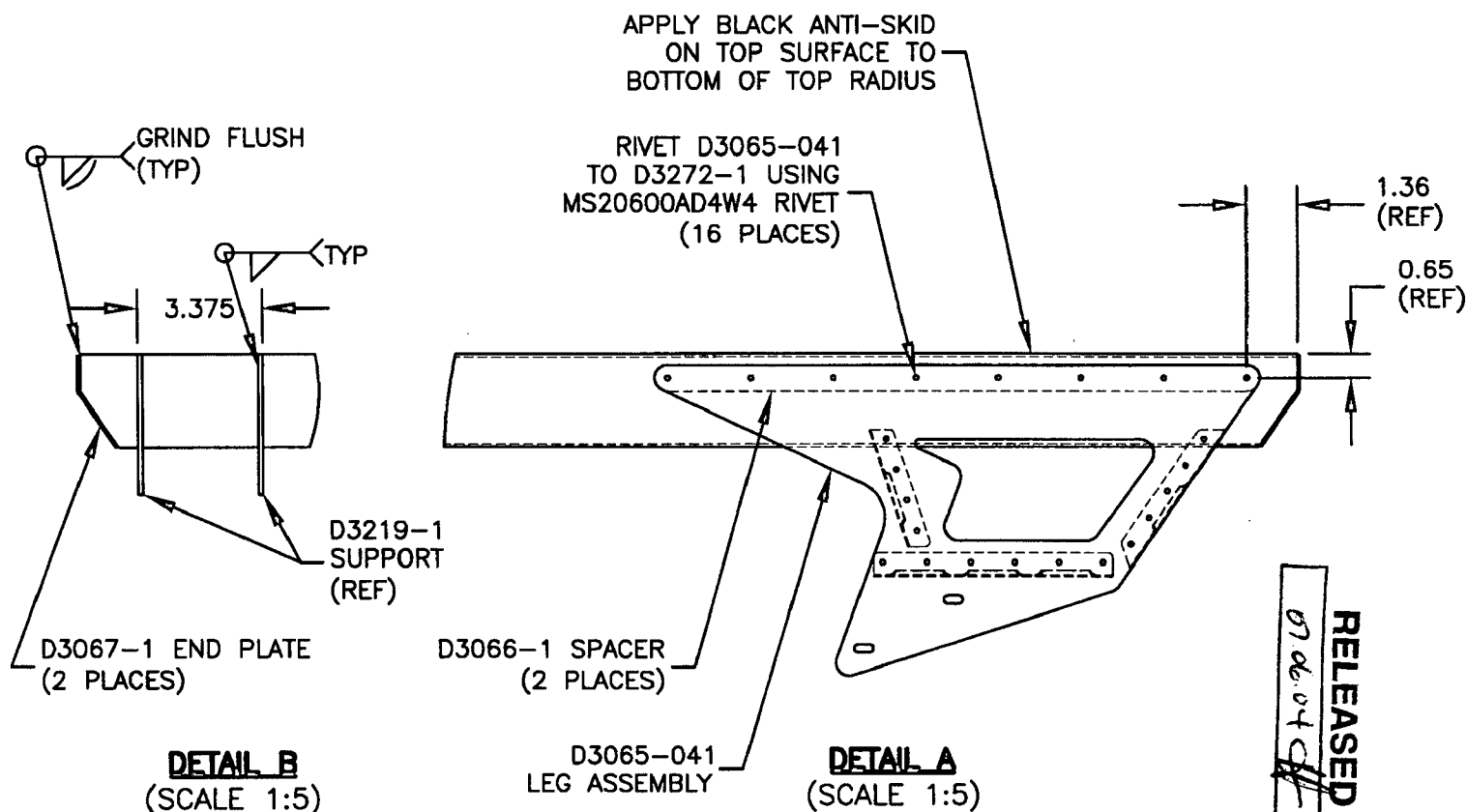
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN	qj	DRAWN BY	JR	DART AEROSPACE LTD
CHECKED	CE	APPROVED	MR	HAWKESBURY, ONTARIO, CANADA
DATE	07.05.18	TITLE	STEP ASSEMBLY, HI LONG	REV. B
				SHEET 2 OF 3
				SCALE



D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)

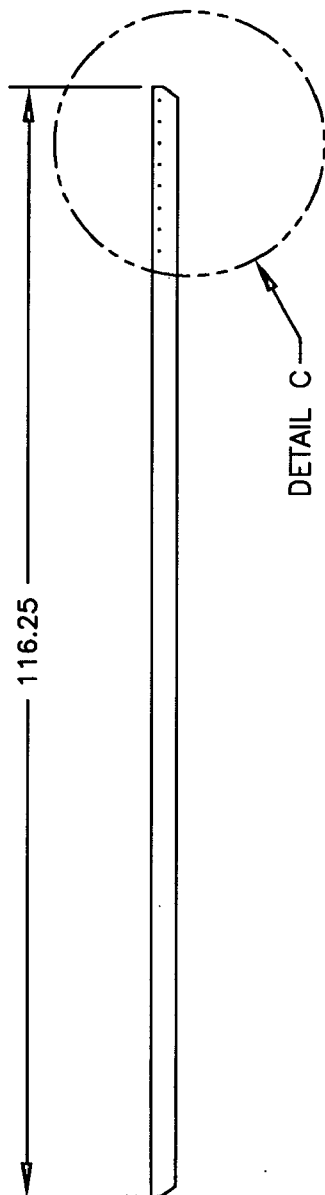




DESIGN <i>GP</i>	DRAWN BY <i>JS</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>JS</i>	DRAWING NO. D3272	REV. B SHEET 3 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE 1:20

RELEASED

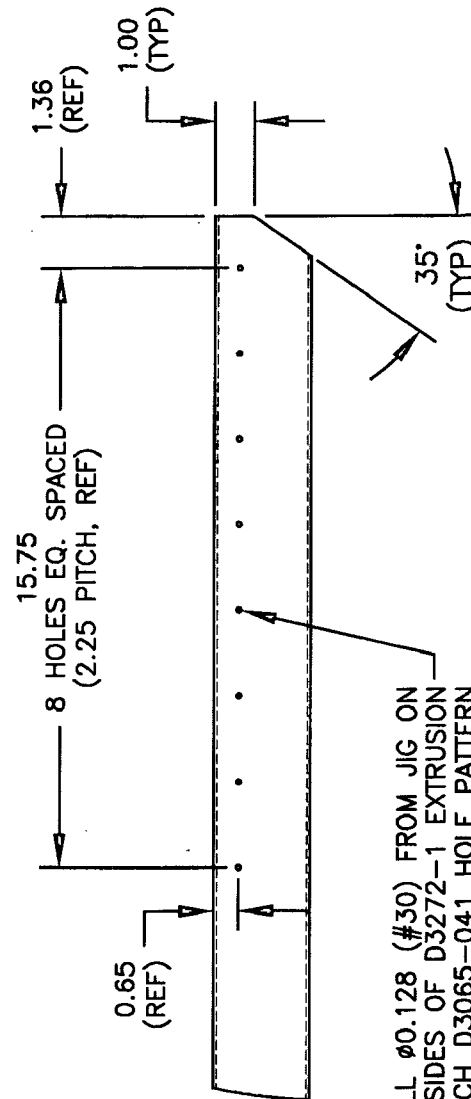
07.06.04 *JS*



DETAIL C

B D3272-1 STEP

(MAKE FROM D2622-120 STEP EXTRUSION)



DRILL $\phi 0.128$ (#30) FROM JIG ON BOTH SIDES OF D3272-1 EXTRUSION TO MATCH D3065-041 HOLE PATTERN

DETAIL C
(SCALE 1:5)

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X						D350-591-213	Heli-Access-Step™, Short Step – High Skid, LH
	X					D350-591-214	Heli-Access-Step™, Short Step – High Skid, RH
		X				D350-591-215	Heli-Access-Step™, Short Step – Low Skid, LH
			X			D350-591-216	Heli-Access-Step™, Short Step – Low Skid, RH
				X		D350-591-311	Heli-Access-Step™, Long Step – High Skid, LH
					X	D350-591-312	Heli-Access-Step™, Long Step – High Skid, RH
1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
				1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
					1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
2	2	2	2	4	4	D2230-3	MOUNTING LUG
2	2	2	2	2	2	D2618	BUSHING
4	4	4	4			D2732-030	CUSHION
				2	2	D2856-400-720	ABRASION STRIP
2	2	2	2	2	2	D3235-1	MOUNTING LUG
				1	1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	AN3-35A	BOLT
				8	8	AN4-13A	BOLT
4	4	4	4			AN4-16A	BOLT
2	2	2	2	2	2	AN5-36A	BOLT
4	4	4	4	4	4	NAS1149D0363J	WASHER (AN960JD10)
12	12	12	12	16	16	NAS1149D0463J	WASHER (AN960JD416)
4	4	4	4	4	4	NAS1149D0563J	WASHER (AN960JD516)
2	2	2	2	2	2	MS21042L3	NUT
6	6	6	6	8	8	MS21042L4	NUT
2	2	2	2	2	2	MS21042L5	NUT
				1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 15 for installation of the DSI 9410-011 Kit.